

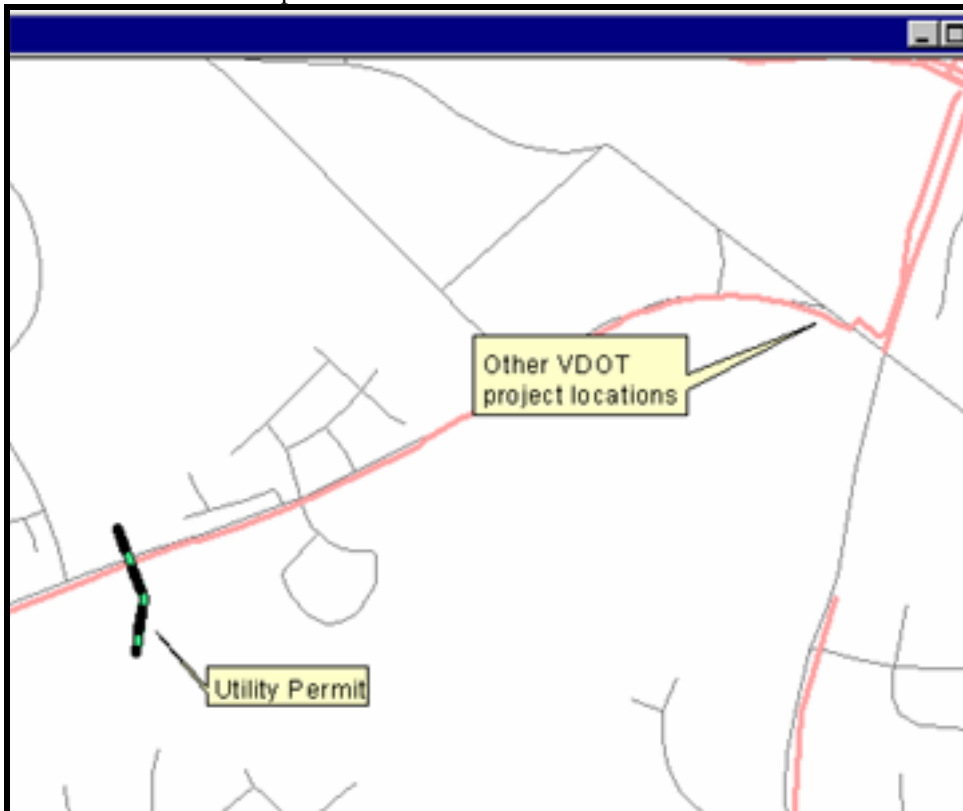
# Fairfax Permits

## GIS LINE FILE for Utility permit submissions

### 1. GIS REQUIREMENT:

- a) Submit a GIS or CAD file showing the proposed work location. This is a “single line drawing” indicating the location of your project. **Note: It is not a digital version of your plan/drawing sheets. This is to show the “location” of your worksite, not the detail.**
- b) Media type: 3.5” floppy or CD-ROM in Windows format
- c) File Types:
  - ESRI shapefile (**preferred**). Include the SHP, DBF, and SHX files.
  - DXF
  - Microstation DGN
  - DWG files of *Release 14 or lower*
- d) All files must be **internally geo-referenced** to:
  - Virginia State Plane Coordinate System (i.e., not Latitude/Longitude)
  - North Zone
  - Datum: NAD1983
  - Units: U.S. Survey Feet

**Example:** the thick, green & black line is an example of what should be delivered to VDOT; your proposed work location is then compared with other VDOT activities in the area.



## 2. HOW TO MEET THIS GIS REQUIREMENT:

It is easiest to meet the requirement by drawing your line over top of street data which is already **geo-referenced** to the specified coordinate system. Either CAD or GIS software can be used for this process, however there are some data format issues to resolve for CAD use.

The basic steps are:

- Load the street data into your CAD/GIS software (see below for description of street data)
- Zoom to your work location
- Draw your line
- Save that line in one of the formats specified in Section 1 and send it in on a diskette with your Permit Application.
- Label your diskette with the name of your file and the file extension such as .DXF, .SHP etc.

## 3. STREET DATA

Street data is available from two sources, Fairfax County GIS Division, and VDOT's NoVa GIS Section.

You can obtain GIS street data from the Fairfax County GIS Office for \$25 (<http://www.co.fairfax.va.us/maps/cd.htm>). This data contains street names (as attributes) which makes it easy to find your work locations. Other useful layers are included on this disk including Tax Map Grids. The data format is an ESRI "coverage" or "shapefile" and requires Arcview, AutoCAD Map or other software which can read these formats. Some CAD programs can also read these formats. **Note:** No viewing software is provided with this data CD. Free versions of ArcExplorer can be downloaded from (<http://www.esri.com/software/arcexplorer/index.html>). ArcExplorer can "view" data but does not allow data editing, creation or data conversion, so another program will still be necessary for export.

If you use CAD software, you will need to convert the street data into a DXF, DWG or something similar that your CAD program can read (if it cannot read the native shapefile or coverage). Many converters exist in the GIS/CAD marketplace. You may find some on CAD user websites and forums. Many AutoCAD and Microstation programs can also do conversions.

VDOT also has a CD of roads that can be provided at no cost. Only Route Numbers are shown, not Street Names as in the data described above. An advantage is that this data is already in DXF format, eliminating the need for a conversion program for CAD software. You may request this CD from VDOT's NoVa GIS Section, contact Larry Camp at [larry.camp@virginiadot.org](mailto:larry.camp@virginiadot.org) or 703-383-2249.